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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,157	03/19/2004	Nischal Abrol	030389	8635
23596 7590 10/14/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
NGUYEN, KHAI N				
ART UNIT		PAPER NUMBER		
2614				
NOTIFICATION DATE		DELIVERY MODE		
10/14/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/805,157

Applicant(s)

ABROL ET AL.

Examiner

KHAI N. NGUYEN

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,9,15,16,18,20-34,37 and 39-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4,5,9,15,16,18,20-27,33,37,39-42,44,46-48 and 50 is/are allowed.
- 6) ☒ Claim(s) 28-32,34,43,45 and 49 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-846)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 29, 2009 has been entered.

Response to Amendment

Applicants' amendment filed January 29, 2009 has been entered. Claims 1, 15, 22, 27, 28, 33, 34, 37, 39, 48, 49, and 50 have been amended. Claims 3, 6-8, 10-14, 17, 19, 35-36 and 38 have been cancelled. No claims have been added. Claims 1-2, 4-5, 9, 15-16, 18, 20-34, 37, and 39-50 are still pending in this application, with claims 1, 15, 22, 28, 33, 34, 37, 39, 48, 49, and 50 being Independent claims.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 18 is objected to because of the following informalities: Claim 18 recites "The filter of claim 17, -- --", but claim 17 is canceled. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. Claims 28-32, 43, 45, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sen et al (U.S. Patent Number 6,765,909 hereinafter "Sen") in view of Le et al. (U.S. Pub. Number 2003/0130000 A1 hereinafter "Le").

Regarding claims 28, and 49, Sen teaches a filter and a method (Figs. 1-6), and a software module embodied in a storage medium (column 7, lines 52-65, i.e., computer usable mediums include: nonvolatile, read-only-memory (ROM), etc.) for efficiently processing/filtering data packet incoming to a wireless mobile station, comprising:

a receiver (Fig. 2, 215 Base Transceiver Station (BTS), 218 Receiving Device, Fig. 6, step 602 Packet Received into Classifier) for receiving IP data packets and Van Jacobson (V J) uncompressed data packets (Fig. 2, Fig. 6, column 6, lines 46-58); and

a delineator (Fig. 2, Fig. 6) for identifying the IP data packets from the VJ uncompressed data packets, wherein said delineator identifies a connection identification in at least one of the VJ uncompressed packets (Fig. 6, steps 604-605, column 7, lines 3-13, i.e., IP Header Compression (IPHC)) as destined for the mobile station, and wherein said delineator forwards the connection identification to a connection identification list for use by the delineator in subsequently assessing a destination of VJ compressed packets associated with the at least one of VJ uncompressed packets (Fig. 2, Fig. 6, steps 602-608, column 6, line 60 through column 7, line 20, i.e., includes Van Jacobson's TCP/IP header compression and RTP/UDP/IP

header compression, and wherein a known connection number reads on "identifies a connection identification").

Sen further teaches to identify IP data packets whether the packet is the compressed or uncompressed type (Fig. 5, If (packet_type == COMPRESSED_TCP, Else { //packet_type=UNCOMPRESSED_TCP). However, Sen might not be clearly described the processing of the data packets at the mobile station, although Sen clearly discloses the user device as a wireless communication device capable of communicating on the Internet includes virtually any IP compatible device (Fig. 1, 102 User, 106 Internet, column 4, lines 6-20). In the same field of endeavor, Le teaches the processing of the data packets is being done at the mobile station (See Le - Figs. 1-2, Fig. 3, 320 Decompression, paragraphs [0022] and [0037]). Le further teaches that the mobile station is operated to use the Point-To-Point (PPP) session to receive the full header sent by the PSDN, and to sue the full header to synchronize its decompressor so as to be accurately process data packets having compressed headers (See Le - paragraph [0025]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the processing of the data packets at the mobile station, as taught by Le, into the method and system of Sen in order to enhance the applications running on a wireless communication device. Since, Sen teaches Sen further teaches to process to identify the IP data packets whether the packet is the compressed or uncompressed type, and thus adding the processing of the data packets at the mobile station is to apply a known technique to a known device

ready for improvement to yield predictable results (see KSR – MPEP 2143). One having ordinary skill in the art would have been motivated to make such a modification so that the mobile station is operated to use the Point-To-Point (PPP) session to receive the full header sent by the PSDN, and to use the full header to synchronize its decompressor so as to be accurately process data packets having compressed headers, as per the teachings of Le.

Regarding claim 29, Sen teaches a method (Figs. 1-6), further subsequently assessing a destination of at least one VJ compressed packet associated with the one of the VJ uncompressed packets in accordance with the connection identification list (Fig. 3, Fig. 4, 402 TCP/IP Header Compression Layer, column 5, line 59 through column 6, line 3, and column 7, lines 3-14, i.e., IP Header Compression (IPHC) protocol).

Regarding claim 30, Sen teaches a method, wherein, further seeking a received connection identification in a subsequent one of the VJ uncompressed packets upon identifying a one of IP packets as destined for the mobile station (Figs. 4-5, column 6, lines 23-25, i.e., checks the connection number “connection identification”).

Regarding claims 31-32, Sen teaches a filter and a method (Figs. 1-6), further comprising a tether to at least one terminal equipment communicatively associated with said delineator (Fig. 1, 102, 106, Fig. 6, column 4, lines 15-18, i.e., devices include wire-

line, wireless, computing, fax, voice and virtually any IP compatible device), wherein the delineator forwards ones of the IP packets not identified as destined for the mobile station to the terminal equipment (Fig. 6, step 604-605, column 6, lines 59-64, i.e., Voice over IP packets to mobile station and TCP data packets to terminal equipment).

Regarding claims 43 and 45, Sen teaches a method (Figs. 1-6), wherein an IP address of the mobile station comprises a destination address for both the mobile station and the terminal equipment (Fig. 6, steps 604-606, column 6, lines 59-67, wherein a determination of whether the packet is data packet or a Voice over IP (VoIP) packet reads on the IP address of the mobile station comprises a destination address for both the mobile station "VoIP packet" and the terminal equipment "data packet").

Claim Rejections - 35 USC § 103

5. Claims 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sen and Le as applied to claims 28, and 49 above, and further in view of Parantainen et al. (U.S. Patent Number 7,054,268 hereinafter 'Parantainen').

Regarding claim 34, Sen and Le disclose everything claimed as applied above (see claims 28 and 49 above). However, Sen does not specifically disclose a snooper. Although Sen teaches to maintain a table of connection numbers, and the connection number fields of TCP/IP packets utilizing Van Jacobson's header compression techniques are snooped and filtered (Figs. 1-2, Fig. 3, 304 Connection Number

"Identification", Fig. 4, 402 TCP/IP Header Compression Layer, Figs. 5-6, column 3, lines 24-40, column 5, lines 14-17, column 6, lines 1-3, and column 7, lines 3-14).

In the same field of endeavor, Parantainen teaches a snoop methodology that can observe data traffic as it is being transferred, and a mobile station application that a snoop is able to observe the data packets being sent to the application, as well as the data packets being generated by the application (Fig. 12, column 20, line 59 through column 21, line 34, and Fig. 15, column 22, lines 26-54). Parantainen further teaches that there is a need for to share the uplink resources for multiple mobile stations to send delay sensitive data such as voice (see Parantainen – column 7, line 54 through column 8, line 20).

Therefore, it would have been obvious to a person of ordinary in the art at the time of the invention was made to incorporate the use of a snoop, as taught by Parantainen, into the method and system of Sen in order to enhance the applications running on a wireless communication device. Since, Sen teaches to maintain a table of connection numbers, the connection number fields of TCP/IP packets utilizing Van Jacobson's header compression techniques are snooped and filtered, and differentiating between data packets and VoIP packets, and thus adding a snoop is to apply a known technique to a known device ready for improvement to yield predictable results (see KSR – MPEP 2143). One having ordinary skill in the art would have been motivated to make such a modification to share the uplink resources among multiple mobile stations, as per the teachings of Parantainen.

Allowable Subject Matter

6. Claims 1-2, 4-5, 9, 15-16, 18, 20-27, 33, 37, 39-42, 44, 46-48, and 50 are allowed.

Regarding claim 1, the prior arts of record fail to disclose or suggest the apparatus is housed on a wireless mobile station, and the receiver, storage, and comparator are also at the mobile station, the apparatus processes IP packets incoming to the mobile station, the mobile station is tethered to a terminal equipment, and the apparatus includes a comparator for comparing the connection identification of the IP packet with a VJ connection identification in a stored list and forwarding the IP packet, without decompressing the IP packet, to the intended destination if the comparing determines that the connection identification does not correspond to the active application on the mobile station, wherein the comparator is for comparing the connection identification of the IP packet with the at least one VJ connection identification in the list and forwarding the IP packet, without decompressing the IP packet, to the intended destination, if the comparing determines that the connection identification does not correspond to the active application on the mobile station. If the comparing determines that the connection identification corresponds to the active application on the mobile station, the IP packet is decompressed and forwarded to the intended destination. Thus, the apparatus, housed on the mobile station, enables the avoidance of the step of uncompressing the headers of VJ compressed TCP/IP packets incoming to the mobile station that are destined for a tethered terminal equipment, as

combined with other limitations specified in the claim. Claims 2, 4-5, 9, and 40 are the dependent claims of claim 1.

Regarding claim 15, the prior arts of record fail to disclose or suggest a filter housed on a wireless mobile station including at least a delineator at the mobile station for processing data packet incoming to the mobile station, as combined with other limitations specified in the claim. Claims 16, 18, 20-21, and 41 are the dependent claims of claim 15.

Regarding claim 22, for reasons similar to those discussed above for claim 1, the prior arts of record do not disclose or suggest a method for processing a VJ compressed data packet incoming to a wireless mobile station including at least comparing at the mobile station, the connection identification of the IP packet with the at least one VJ .connection identification in the list and forwarding the IP packet without decompressing if it is not destined for an active application on the mobile station and decompressing the packet if it is destined for an active application on the mobile station, as combined with other limitations specified in the claim. Claims 23-27 and 42 are the dependent claims of claim 22.

Regarding claim 33, for reasons similar to those discussed above for claim 1, the prior arts of record do not disclose or suggest a system for efficiently processing a .packet incoming to a wireless mobile station operable for wireless communication with a Packet Data Service Node (PDSN), comprising at least a snooper on said mobile station, to compare the VJ connection identification to a list, and to forward the TCP/IP packet with the VJ compressed header to the terminal equipment, without

decompression, if the VJ connection identification matches the second connection identification, as combined with other limitations specified in the claim. Claim 44 is the dependent claim of claim 33.

Regarding claim 37, for reasons similar to those discussed above for claim 1, the prior arts of record do not disclose or suggest a method for assessing the destination of an Interact Protocol (IP) packet that has arrived wirelessly at a mobile station (MS), including at least if the TCP/IP packet header is VJ compressed, then comparing at the MS the CID of the IP packet to each CID on the CID list; if the CID of the IP packet is on the CID list and corresponds to the active MS application, then uncompressing the VJ compressed header and passing the IP packet to the MS with the uncompressed VJ compressed header; and if the CID Of the IP packet is not on the CID list or corresponds to the active TE application, then forwarding the IP packet to the TE without uncompressing the VJ compressed header, as combined with other limitations specified in the claim. Claim 46 is the dependent claim of claim 37.

Regarding claim 39, the prior arts of record do not disclose or suggest an apparatus for assessing the destination of an Internet Protocol (IP) packet that has arrived wirelessly at a wireless mobile station (MS) without uncompressing a compressed header of the IP packet, wherein the MS acts as a gateway for applications running on either the MS or a terminal equipment (TE) tethered to the MS, as combined with other limitations specified in the claim. Claim 47 is the dependent claim of claim 39.

Regarding claim 48, for reasons similar to those discussed above for claim 1, the prior arts of record do not disclose or suggest a software module embodied in a computer readable, storage medium the storage medium encoded with code capable of being executed by a computer for efficiently processing a VJ ,compressed data packet incoming to a wireless mobile station, comprising at least a third module operable to cause the mobile station to compare the connection identification of the IP packet with the at least one VJ connection identification in the list and forwarding the IP packet, without decompressing the IP packet, to the intended destination if the comparing determines that the connection identification does not correspond to the active application on the mobile Station, as combined with other limitations specified in the claim.

Regarding claim 50, for reasons similar to those discussed above for claim 1, the prior arts of record do not disclose or suggest a software module embodied in a computer readable storage medium the storage medium encoded with code capable of being executed by a computer for assessing the destination of an. IP packet that has arrived at a wireless mobile station (MS), the software module comprising at least a fourth module operable, if the TCP/IP packet header is VJ compressed, to cause the MS to compare the CID of the IP packet to each CID on the CID list and to uncompress the VJ compressed header and pass the IP packet to the MS with the uncompressed VJ compressed header, if the CID of the IP packet is on the CID list and corresponds to the active MS application; and forward the IP packet to the TE without uncompressing the

VJ compressed header, if the CID of the IP packet is not on the CID list or corresponds to the active TE application, as combined with other limitations specified in the claim.

Response to Arguments

7. Applicant's arguments with respect to claims 28-32, 34, 43, 45, and 49 have been considered but are moot in view of the new ground(s) of rejection.

However, in response to the arguments of claims 28, 34, and 49, that the references do not teach or reasonably suggest the functionality upon which the Examiner relies for the rejection.

The Examiner first emphasizes for the record that the claims' language is broad. In addition, the Applicant has not argued any narrower interpretation of the claim limitations, nor amended the claims significantly enough to construe a narrower meaning to the limitations.

Since the claims breadth allows multiple interpretations and meanings, which are broader than Applicant's disclosure, the Examiner is required to interpret the claim limitations in terms of their broadest reasonable interpretations while determining patentability of the disclosed invention. See MPEP 2111. In other words, the claims must be given their broadest reasonable interpretation consistent with the specification and the interpretation that those skilled in the art would reach. See *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000), *In re Cortright*, 165 F.3d 1353,

1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999), and *In re American Academy of Science Tech Center*, 2004 WL 1067528 (Fed. Cir. May 13, 2004).

Any term that is not clearly defined in the specification must be given its plain meaning as understood by one of ordinary skill in the art. See MPEP 2111.01. See also *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), *Sunrize Roots Enter Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003), *Brookhill- Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir.2003).

The interpretation of the claims by their broadest reasonable interpretation reduces the possibility that, once the claims are issued, the claims are interpreted more broadly than justified. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). Therefore, the failure to significantly narrow definition or scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims.

The Examiner has interpreted the claims broadly and reiterates the need for the Applicant to distinctly define the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI N. NGUYEN whose telephone number is

(571)270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. N. N./
Examiner, Art Unit 2614
10/08/2009

/Rasha S AL-Aubaidi/
Primary Examiner, Art Unit 2614